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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/056,946 | 01/25/2002 | Robert Nason Thomas | | 3608 |

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EXAMINER

WAKS, JOSEPH

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
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2834

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/056,946 | Applicant(s) THOMAS, ROBERT NASON | |
| | Examiner Joseph Waks | Art Unit 2834 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The amendment filed on June 20, 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: the lift-developing blade with an airfoil-shaped cross-section.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The application of airfoil-shaped sections attached to the shaft for the applicant's disclosed structure is not suggested or otherwise described in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-5, and 13** are rejected under 35 U.S.C. 102(b) as being anticipated by **Pohl (US 4,156,580)**.

Pohl discloses invention as claimed: a pair of wind turbines 2 and 3 wherein each having a shaft 4 that rotates about a vertical axis, and a blade attached to the shaft for rotation, wherein the blade is spaced radially outward from the shaft by a predetermined radius, and wherein the shafts are separated from each other by a distance that is less than three times the radius.

Re claim 2, the feature of the shafts rotating in opposite direction from each other is inherent to the disclosed structure.

Re claims 3-5, the feature of the shafts separated from each other by a distance greater than two diameters is disclosed in Figures 1 and 3. The feature of the distance greater than two diameters but less than two times the radius plus 8, 5 or 3 feet is inherent to the disclosed structure.

The feature of the aerodynamic interaction between the wind turbines increasing the system efficiency is inherent to the Pohl's disclosed structure.

Re claim 2, the feature of the shafts rotating in opposite direction from each other is inherent to the disclosed structure.

Re claims 3-5, the feature of the shafts separated from each other by a distance greater than two diameters is disclosed in Figures 2 and 3. The feature of the distance greater than two diameters but less than two times the radius plus 8, 5 or 3 feet is inherent to the disclosed structure.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pohl (US 4,156,580)** in view of **Wells (US 4,221,538)**.

Pohl discloses the wind turbines essentially as claimed. However, **Pohl** does not disclose the rotor solidity between the 30-40% or substantially 33%.

Wells discloses in column 2 a rotor 2 driven by air and having solidity factor in the range between 30-40%.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the turbines as taught by **Pohl** with the rotor having solidity between the 30-40% as taught by **Wells** for the purpose of optimizing the rotor efficiency without significantly increasing the rotor cost.

It would be further obvious to provide the rotor having solidity substantially 33%, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

3. **Claims 8-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Pohl (US 4,156,580)** in view of **Tackett (US 4,118,637)**.

Pohl discloses the wind turbines essentially as claimed. However, **Pohl** does not disclose the turbines comprising a fail-safe braking system.

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Tackett discloses a wind turbine having a pneumatically actuate fail-safe and self-resetting braking system 87, for the purpose of gradually slowing down and stopping the turbine in case of loss of power and to provide means for automatic restart of the system when ready for operation.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the turbines as taught by **Pohl** with the fail-safe braking and self-resetting system as taught by **Tackett** for the purpose of stopping the turbine in case of loss of power and automatically restart the turbine when ready for operation.

It would have been further an obvious matter of design choice to provide a single compressor serving both turbines for the purpose of supplying air to the braking system since applicant has not disclosed that the single compressor solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with one or more compressors in accordance to the selected design criteria.

4. **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Pohl** (US 4,156,580) in view of **Brammeier** (US 5,495,128).

Pohl discloses the wind turbines arranged on a tower essentially as claimed. However, **Pohl** does not disclose the horizontal axis turbine arranged adjacent the vertical turbines wherein the extreme height of the horizontal turbine is taller than the height of the vertical turbine.

Brammeier discloses the wind turbine system having the horizontal axis turbine 12 arranged adjacent the vertical turbines 13 and 14 wherein the extreme height of the horizontal turbine is taller than the height of the vertical turbines, for the purpose of providing the most efficient utilization of the available wind current.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to design the turbines as taught by **Pohl** and provide the horizontal axis turbines adjacent the vertical turbine wherein the extreme height of the horizontal turbine is taller than the height of the vertical turbine as taught by **Brammeier** for the purpose of achieving the most efficient utilization of the available wind current.

Response to Arguments

6. Applicant's arguments filed on June 20, 2003 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show the features of the lift-developing blade with an airfoil-shaped cross-section, it is noted that the feature upon which applicant relies is a new matter that is not supported by original disclosure. Moreover, this feature is well known in the prior art as increasing the rotor aerodynamic efficiency as clearly admitted by applicant in page 1. Applicant's disclosure, on the other hand, concentrates on the increased aerodynamic efficiency through vortex interaction between two adjacent turbines irrelevant to the type of interacting rotors.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Waks whose telephone number is (703) 308-1676. The examiner can normally be reached on Monday through Thursday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R Ramirez can be reached on (703) 308-1371. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.


JOSEPH WAKS
PRIMARY PATENT EXAMINER
TC-2800

JW